

Date: Sat, 5 Nov 94 04:30:23 PST  
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>  
Errors-To: Ham-Ant-Errors@UCSD.Edu  
Reply-To: Ham-Ant@UCSD.Edu  
Precedence: List  
Subject: Ham-Ant Digest V94 #366  
To: Ham-Ant

Ham-Ant Digest                      Sat, 5 Nov 94                      Volume 94 : Issue 366

Today's Topics:

                    50 ohms why ?  
                    Dual Band J-Pole? (2 msgs)  
    Experiences with Isotron limited space HF antennas (2 msgs)  
                    How good is 10 db 2 meter yagi? (3 msgs)  
                    How well will it work?  
                    Rotor And or tower wanted  
                    swr & xmission lines

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>

Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 4 Nov 94 16:03:29 GMT  
From: n1nlr@mara.ORG (Mark Greenlaw)  
Subject: 50 ohms why ?

> Why choose 50 ohms as the stanard characteristic impedance for RF kit ?

> : This may be folklore, or maybe not, but the story I've heard was that it  
> : was chosen during (or around) World War II because that's what #12 wire  
> : inside 1/2" copper water pipe turns out to be.

The way I understand it is that the power capabilitys and signal attenuation  
of coax depends upon its impedance. The loss is lowest at 75 ohms (why the  
TV and CATV people use it), You can handle the most power at 30 ohms.  
SO, if you take the geometric mean of these two you get 50 ohms or so!  
Makes sense. But, I still like the pipe and wire story.

73, Mark N1NLR @ .... Take your pick  
e-mail n1nlr@mara.org  
AX.25 n1nlr@n1jfu.#ema.ma.usa.noam  
AMPR n1nlr@switch.foxboro.ampr.org

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Date: Thu, 3 Nov 1994 19:10:51 GMT  
From: hausman@patch.tandem.com (hausman\_john)  
Subject: Dual Band J-Pole?

In article <Cynpnz.Fo9@zimmer.CSUFresno.EDU>, rafael@zimmer.CSUFresno.EDU (Rafael Solis) writes:

>Folks!

>

>Is it possible to build a 2m/73cm dual band J-Pole? I'm asking since  
>I bought one at a hamfest (made of aluminum rods) that the seller told  
>me it would work with both bands. After seeing all the J-pole designs  
>posted in this group I noticed that the measurements are different for  
>each band. Did the seller lie to me? The antenna works great  
>with my 2m rig, but I'm planning to buy a dual-band radio in the near  
>future, will I have to buy another antenna?

>

>

>73 de Rafael, KE6JSRFrom hausman@patch.tandem.com Thu Nov 3 11:07:22 1994

This is mainly just based on my experience, I'm not sure about the theory.

I also use a 2-meter J-pole as a dual band 2 meter/440 antenna. I have been satisfied with it, but my requirements on 440 are pretty simple. I believe that it probably isn't a great match on 440, but most modern radios have SWR protection built into the amp so the worst that should happen is that the transmitter might decide to put out a little less power than it might otherwise and you might get more heat (dissipated reflected power), the second might shorten transmitter life on high power, but should be OK on low power.

As I said, my requirements were pretty simple:

- a single coax for my 2M/440 HT (I didn't want to have to swap coax to move from one band to the other)
- good performance on 2M (there are a number of repeaters I work there + packet where

- performance is more critical)
- able to hit a certain 440 repeater reliably
  - cheap

The 440 repeater I wanted to work was marginal with my HT on high power going into its stock "rubber duck" antenna. Those antennas are typically pretty bad, so the J-pole didn't have much "competition". Also, just the fact that the J-pole was on the roof put it 30 feet higher than the "benchmark" rubber duck; that's a big difference on UHF. Anyway, it worked for me. I went from marginal on high power (rubber duck) to full quieting on low power. That's not very scientific, but it did everything I wanted (full quieting, lowest power, low cost).

Good luck,  
...John WB6OHE

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Date: Thu, 03 Nov 1994 08:58:09 -0600  
From: kgk@nwu.edu (Kenneth Kalan)  
Subject: Dual Band J-Pole?

In article <Cynpnz.Fo9@zimmer.CSUFresno.EDU>, rafael@zimmer.CSUFresno.EDU (Rafael Solis) wrote:

> Folks!  
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> Is it possible to build a 2m/73cm dual band J-Pole? I'm asking since  
> I bought one at a hamfest (made of aluminum rods) that the seller told  
> me it would work with both bands. After seeing all the J-pole designs  
> posted in this group I noticed that the measurements are different for  
> each band. Did the seller lie to me? The antenna works great  
> with my 2m rig, but I'm planning to buy a dual-band radio in the near  
> future, will I have to buy another antenna?  
>  
The Sept. 94 issue of QST, Page 61, has an article on how to build a 2m/70cm J Pole antenna using 300 ohm TV twin lead. So from that info, I'd say yes there is a dual band J Pole. I may construct one just for fun. If you have that issue available, check it out. That issue also has a how to on building a quick charger.

Regards

Ken

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Kenneth Kalan

PP ASEL

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Date: 3 Nov 1994 14:05:52 GMT  
From: John Fleming <johnflem@mcs.com>  
Subject: Experiences with Isotron limited space HF antennas

Riaydth,

I hope they work; I just ordered one (40). I'm a bit concerned over all of the negative responses, but Ralph at Isotron seems very knowledgeable and helpful; we'll see. I think that one big NEGATIVE is that he doesn't offer a money-back guarantee; If I had a product that could be re-stocked with relatively little preparation, I would offer at least a 90% money-back guarantee on the thing. Well, my \$70 is out the window, so I'll let you know my experiences next week. It'll be a challenge, since I'll be using it roof-mounted for QRP. If I can get out with it in Chicago, anybody can!

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Date: Wed, 2 Nov 1994 19:43:07 GMT  
From: alanb@hpnmarb.sr.hp.com (Alan Bloom)  
Subject: Experiences with Isotron limited space HF antennas

Galen Watts (galen@picea.CFNR.ColoState.EDU) wrote:  
: In article <CyLuq3.E6r@srngenprp.sr.hp.com> alanb@hpnmarb.sr.hp.com (Alan Bloom)  
writes:

: >  
: >I used the 80 meter one on a Field Day many years ago. It worked about  
: >as well as a dummy load. I found that if I shorted the coax center  
: >conductor to shield and used the coax as a random wire, I got out much  
: >better. (By "much better" I mean 10-20 dB)

: Did you just plug it in and go, or did you go thru the tuning procedure?

It was tuned up by one of our club members who was an Isotron dealer at the time. I assume he did it correctly.

: Did you have it out in the clear and up away from the ground?

It was mounted on a mast. I don't remember exactly how high it was, but it was well up in the clear.

The ads I have seen claim it is just as good as a full sized dipole. I would be very surprised if that's true, no matter how carefully it is tuned.

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Date: 2 Nov 1994 16:18:10 GMT  
From: s\_kwan@hk.super.net (Simon Kwan)  
Subject: How good is 10 db 2 meter yagi?

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Date: 2 Nov 1994 16:21:08 GMT  
From: s\_kwan@hk.super.net (Simon Kwan)  
Subject: How good is 10 db 2 meter yagi?

Subject: How good is 10 db 2 meter yagi?  
Newsgroups: rec.radio.amateur.antenna  
Organization: Hong Kong SuperNet  
Summary:  
Keywords:

Hello fellow ham,

My new car whip 5/8 wavelength (2 meters) recently installed at my apartment does not work well and I am looking into the use of a small Yagi. The antenna will be mounted at window since the roof is barred from access. Appreciate any comment from experience or calculation figure based on theory on the expected improvement on communication range improvement from a 10 db Yagi in down town city environment. Thanks in advance. Please reply by e-mail if possible.

73

Simon VR2YRD Hong Kong

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Date: 2 Nov 1994 16:22:49 GMT  
From: s\_kwan@hk.super.net (Simon Kwan)  
Subject: How good is 10 db 2 meter yagi?

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Newsgroups: rec.radio.amateur.antenna  
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Summary:

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Simon VR2YRD Hong Kong

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Date: 31 Oct 1994 15:11 -0500

From: soderman@ewirb-wr.UCSD.EDU (SODERMAN.WALTER)

Subject: How well will it work?

In article <38v4q7\$5lp@chnews.intel.com>, Cecil\_A\_Moore@ccm.ch.intel.com writes...

>Also, horizontal multi-band dipoles work a lot better than inverted-V's  
>on the higher bands where you get a cloverleaf radiation pattern.

>--

>73, Cecil, KG7BK, 00TC (All my own personal fuzzy logic, not Intel's)

Thanks, Cecil, for your advice. The reason I was going with the inverted-V is because I only have tiny trees and can't attach to the house, so I was looking for a telescopic mast of some sort that I could use to create an apex with some good height. My understanding is that an 80/40 meter dipole would be next to worthless at a height of 15 feet off of the ground plane, and that's as high as my trees will get it. With the inverted vee arrangement, the ends would be about 12 to 15 feet up, and the apex would be on a mast around 30 or 35 feet up. Any ideas on this? Who makes a good mast for this? And, insofar as the 450 ohm ladder line is concerned...how do I connect a balanced line like the ladder line to my coax port on my xcvr which already has a built-in antenna tuner?

Walt KE4QOH

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Date: 2 Nov 1994 23:11:08 -0500

From: jwolter@aol.com (JWolter)

Subject: Rotor And or tower wanted

I am looking for a tower and or rotor for a 5 sq ft. Antenna. The rotor must be able to handle 5 sq. ft windload. I live in Southern CA. If you also live in Southern CA. I can pick tower up. My other rotor just died. it was a homebrew that didn't work too well. If you have a rotor and or tower, let me know. Thanks  
Jason

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Date: 4 Nov 1994 20:38:25 GMT  
From: lakeith@robins.af.mil ( Larry CONTRACTOR Keith Mr.)  
Subject: swr & xmission lines

SODERMAN.WALTER (soderman@ewirb-wr) wrote:  
: does a balanced feeder provide lower swr naturally, or is it just easier to  
: tune for a lower swr so that it "looks" better to the xcvr?

Neither..

Assuming that you intend to use the balanced feedline to feed an "all-band" antenna, the balanced feedline has less loss than coax when the SWR is high, as it is going to be with such an antenna.

What are you trying to do?

73,

Larry, KQ4BY

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End of Ham-Ant Digest V94 #366  
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